



ASTRO

ENVELOPE FEEDER

AMC-2000-16

FOR

HAMADA RS34 / VS34

INSTALLATION AND OPERATING INSTRUCTIONS

INTRODUCTION

Thank you for purchasing the Astro Envelope Feeder. It is fast, efficient, reliable, and is designed to give you many years of trouble-free service.

Numerous built-in features of the Astro Envelope Feeder combined with state-of-the art technology make this unit superior. Top load/bottom vacuum feed provides continuous printing of various sized envelopes, cards, and tags. Uniquely designed conveyor board with its synchronized side guides and push guide provides accurate registration for secondary color operations. Photoelectric sensor is the key element in the synchronization of the Envelope Feeder to the Duplicator and is designed to give many years of virtually trouble-free operation.

Flexibility. Optional Auxiliary Installation Kit provides compatibility to additional presses or duplicators of the same type. An optional Dual Stream Feed Kit is available for feeding different size envelopes simultaneously to double your production needs.

SPECIFICATIONS*

VOLTAGE REQUIREMENTS:	115 VAC, 60 Hz, 10A
OPTIONAL AVAILABILITY:	220 VAC, 50 Hz, 5A
ENVELOPE DIMENSIONS:	Minimum: 3" x 5" (7.6 x 12.7 cm) Maximum: 11" x 16-1/4" (27.9 x 41.3 cm)
MAXIMUM FEEDING SPEED:	Governed by Press
MACHINE DIMENSIONS:	Width: 20" (50.8 cm) Length: 37" (94 cm) Height: 42" (106.7 cm) Weight: 150 lbs. (68 kg)
AVAILABLE OPTIONS:	Conveyor Delivery Pulse Generator Kits Dual Stream Feed Kit

* Manufacturer reserves the right to change specifications without written notice.

SAFETY PRECAUTIONS

**THIS EQUIPMENT PRESENTS NO PROBLEM WHEN USED PROPERLY.
OBSERVE SAFETY RULES WHEN OPERATING FEEDER.**

READ THIS MANUAL CAREFULLY AND FOLLOW RECOMMENDED PROCEDURES.

1. KEEP HANDS, HAIR, AND CLOTHING CLEAR OF ROLLERS, TAPES AND OTHER MOVING PARTS.
2. ALWAYS TURN MACHINE OFF BEFORE MAKING ADJUSTMENTS OR CLEANING MACHINE.
3. DISCONNECT POWER CORD WHEN MAKING ANY MACHINE ADJUSTMENTS OR PERFORMING ANY MAINTENANCE NOT COVERED IN THIS MANUAL.

CAUTION

**THIS EQUIPMENT MUST BE CONNECTED TO A PROPERLY GROUNDED OUTLET.
FAILURE TO DO SO CREATES A POTENTIAL DANGER OF ELECTRICAL SHOCK.**

PARTS LIST

The following parts are included with this machine.

Check and identify all parts with those listed below:

A.	ENVELOPE FEEDER	84-000-00
B.	STAND WITH PUMP ASSEMBLY	(See Pages 13 &14)
C.	PULSE GENERATOR ASSEMBLY	89-150-200
D.	PLASTIC TIES (4)	123-0113
E.	FRONT ENVELOPE GUIDE R/H	84-108-15
F.	FRONT ENVELOPE GUIDE L/H	84-108-14
G.	CENTER ENVELOPE GUIDE	71-140-13
H.	REAR ENVELOPE GUIDE	84-108-20
I.	LEVELING KNOB	80-108-22
J.	LOCKING THUMBSCREW (4)	80-108-20
K.	PAPER HEIGHT STOP	89-100-82
L.	SHEET SEPARATOR (4)	71-109-05
M.	SPRING	71-120-02
N.	SUCTION CUP (4)	71-134-15
O.	ALLEN WRENCH – 1/16"	123-0057
P.	ALLEN WRENCH – 3/32"	123-0058
Q.	FUSE, 2 AMP (FAST BLO)	123-0285
R.	FUSE, 10 AMP (SLO BLO)	123-0090
S.	SUCTION FOOT CAP (4)	123-0415
T.	WHEEL CASTERS (4)	(2) 123-0517, (2) 123-0521

UNPACKING INSTRUCTIONS

1. Unpack Stand and Feeder. Check parts against Parts List on **Page 1**.
2. Remove two screws that mount Side Plates R/H and L/H to Stand Base. Reposition Side Plates using two lower holes so Plates are raised from their packing position. Refer to **[Figure 1A]**. **IMPORTANT! Feeder cannot be leveled to Press unless this is done.**
3. Install four casters to base of Stand.
4. Place Feeder on top of Stand by locating two mating points on bottom of Feeder. **[Fig. 1B]**
5. Match two mating points with corresponding holes on top of Stand and slide into slots.
6. Locate two thumbscrew holes at front of Stand.
7. Install two (2) 1/4-20 x 1/2 thumbscrews provided in **Accessory Kit**.
8. Secure Feeder by tightening thumbscrews into threaded holes.

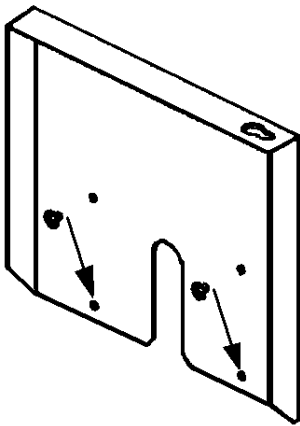


Figure 1A

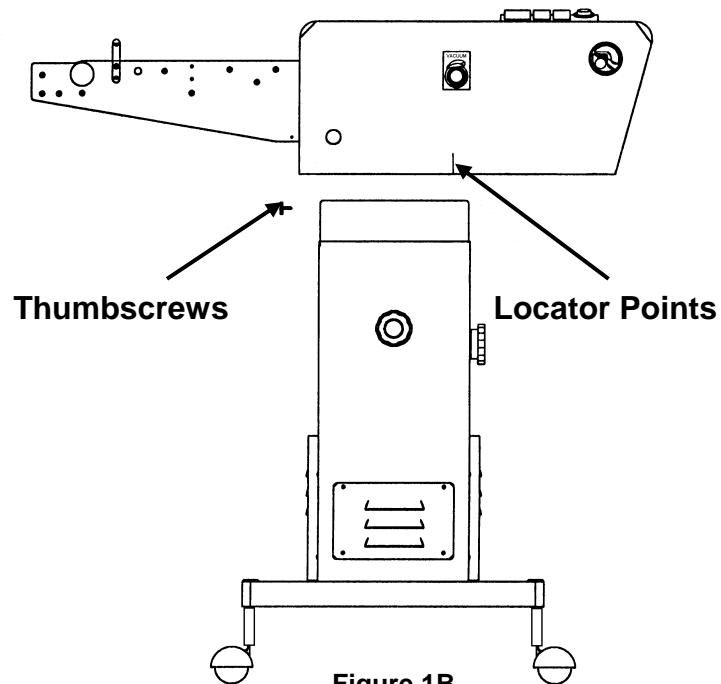


Figure 1B

INSTALLATION INSTRUCTIONS

1. Unplug Press.
2. Remove Rear Drive Cover from Press.
3. Remove Chain Tensioner on Forwarding Roller Drive from Press [Figure 2A].
4. Using previously removed screws, mount Pulse Generator-Tensioner Assembly on Duplicator.

NOTE: MAKE SURE PROPER TENSION IS APPLIED TO CHAIN. REFER TO DUPLICATOR SERVICE MANUAL.

5. Use Hand Wheel to turn Press and check that gap between magnet and sensor is $1/32"$, $\pm 0.010"$. Adjust gap by loosening sensor mounting screws and moving bracket [Figure 2B].
6. Route cable from Sensor out under Press. Secure with (P/N 123-0113) Plastic Ties (*provided*). Make sure sensor cable is not interfering with any moving parts on Press.
7. Close Cover and plug in Press.
8. Install (P/N 89-100-82) Paperboard Stop to Paper Guide Bar [Figure 3]. This prevents paperboard from coming up and hitting Feeder.

WARNING:
FAILURE TO DO THIS RESULTS IN SERIOUS DAMAGE TO ENVELOPE FEEDER AND PRESS.

9. Roll Feeder up to Press. If Feeder Front Stop Plate Hook is not even with upper edge of Press' Front Apron, adjust Feeder Stand. If Feeder is to be used on more than one Press, adjust Presses to one height (*eliminates additional set up time*).

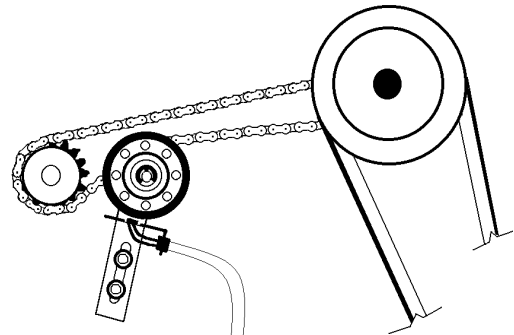


Figure 2A

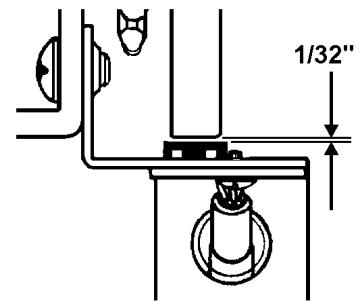


Figure 2B

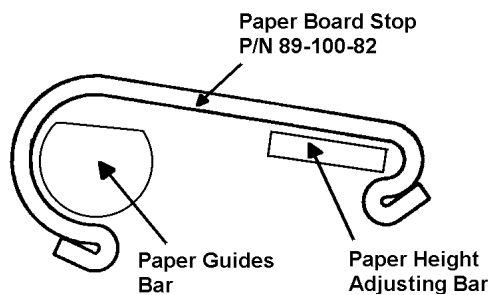


Figure 3

10. Move Duplicator Paper Guides in until they touch Feeder Conveyor. Tighten Feeder Conveyor clamp screw (*located under Conveyor*).
11. Connect Pulse Generator cable to Feeder cable. Plug Feeder into 115 VAC, 15 AMP outlet.

WARNING: POWER FLUCTUATIONS CAUSED BY AN OVERLOAD OF EQUIPMENT ON SAME BRANCH CIRCUIT MAY AFFECT PERFORMANCE OF FEEDER.

FEEDER STAND HEIGHT ADJUSTMENT

1. Roll Feeder to Duplicator. Measure how far Feeder's Front Stop Plate Hook is from upper edge of Press' Front Apron. If difference is more than 3/8", adjust Stand height.
2. **To adjust Stand height:** Loosen two knobs on either side of Stand. Turning locking knobs counterclockwise unlocks Stand, which allows it to be adjusted. Adjust height by turning third knob (*Adjustment Knob*) clockwise to raise height of Stand, and counterclockwise to lower it.
3. Tighten locking knobs after height is adjusted.

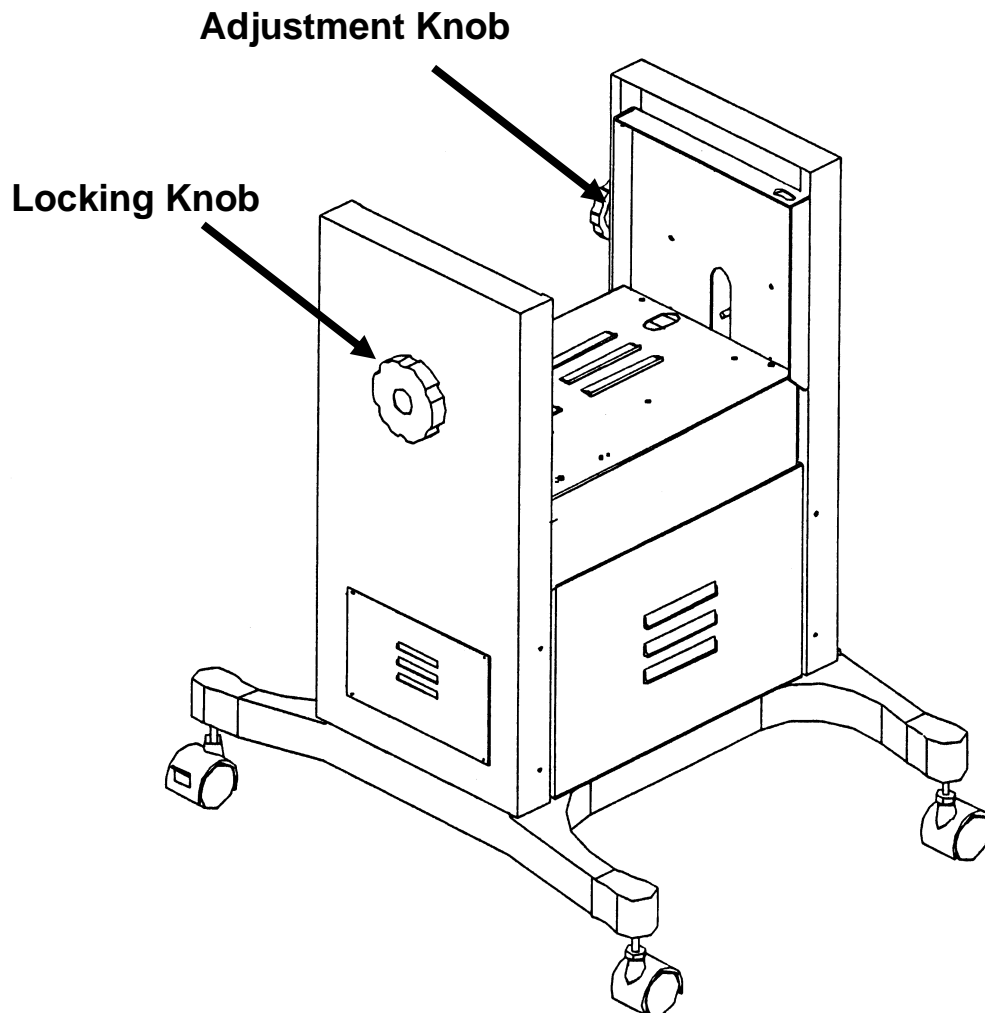


Figure 4

CONTROLS

CONTROL PANEL

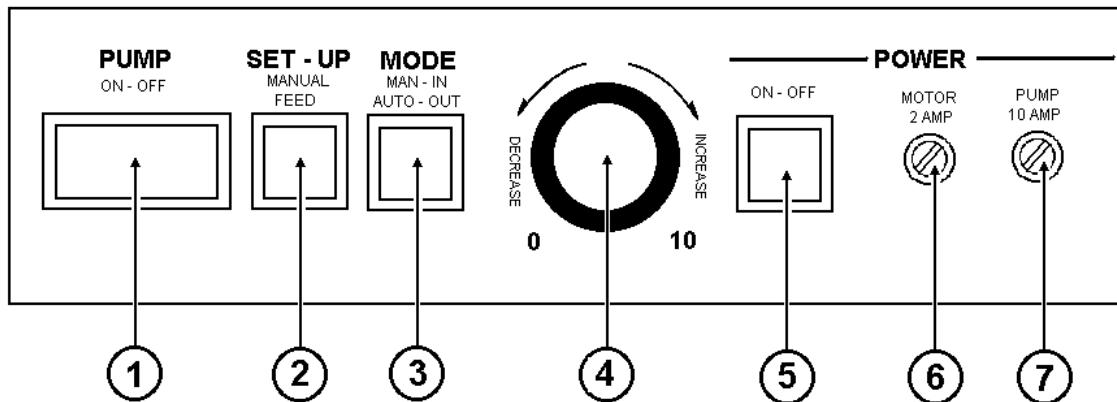


Figure 5

1. **PUMP** – Turns Feeder Pump ON and OFF.
2. **SET-UP** – Feeder makes a full cycle bringing one envelope to Press. Mode Switch (#5) must be on **MANUAL**; Pump Switch (#7) must be ON and Drive Motor running.
3. **MODE SWITCH** – In depressed position, activates Speed Control (#4). In released position, activates Pulse Generator and synchronizes Feeder with Press.
4. **FEEDER SPEED CONTROL** – While Feeder is on **MANUAL** mode, it enables operator to adjust speed of Drive Motor during set-up.
5. **POWER SWITCH** – Turns Feeder ON and OFF.
6. **FUSE** – Drive Motor, 2 AMPS
7. **FUSE** – Pump, 10 AMPS

VACUUM BLEED VALVE

Vacuum Bleed Valve is located on Feeder Left Side Frame. Turning it clockwise increases amount of vacuum going into suction feet. Turning it counterclockwise decreases vacuum.

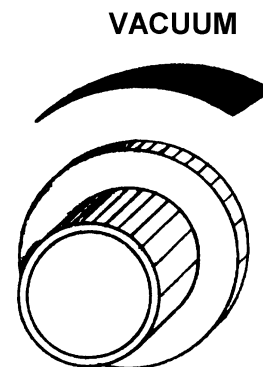


Figure 6

OPERATING INSTRUCTIONS

1. Adjust Envelope Feeder Stand to height of Press' Front Feed Plate.
2. Hook Front Feed Plate on Envelope Feeder over bar on Press' Feeder. Tighten clamp screw assembly securely.
3. Plug Pulse Generator into connector provided on Envelope Feeder. Plug pump into receptacle provided on Envelope Feeder.
4. Plug Envelope Feeder into wall receptacle.

5. Attach Front Envelope Guides [#1, Fig. 7] approximately in middle of Feeder (as shown).
6. Place an envelope in Guides.
7. Attach Rear Envelope Guide [#2, Fig. 7] using slot in Feeder floor nearest rear end of envelope, then adjust Anti-skewing Guides to sides of envelope [#3, Fig. 7].

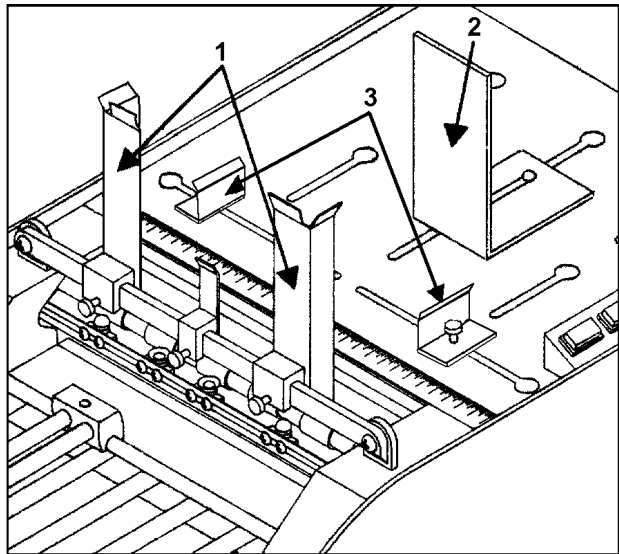


Figure 7

8. Adjust Envelope Guides so there is no more than 1/16" (1.6 mm) clearance in all directions.

NOTE: EXCESSIVE CLEARANCE RESULTS IN MISFEEDING AND IMPROPER PERFORMANCE.

9. Position suction cups distributed evenly with outside cups approximately 3/4" (2 cm) from ends of envelope. **NOTE THAT ENVELOPE SIZE DETERMINES HOW MANY SUCTION CUPS SHOULD BE USED.**

10. Place suction foot vacuum caps (P/N: 123-415) on suction feet not used.
11. Using scale on Feeder floor [#1, Fig. 8], and scale on Conveyor [#2, Fig. 8], roughly adjust Stop Guide [#4, Fig. 8], and Push Guide [#3, Fig. 8], so envelope coming down will clear them.

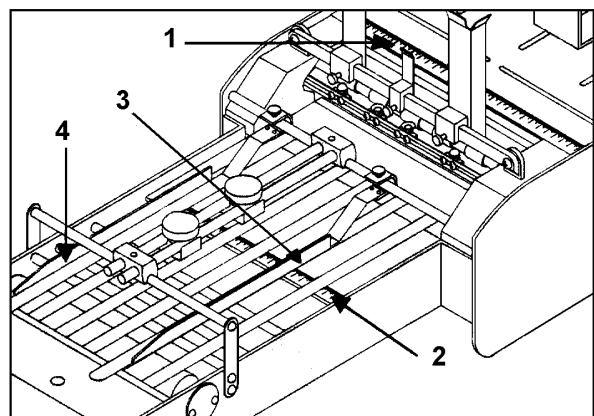


Figure 8

12. Place a small stack of envelopes in Guides.
 13. Using adjusting thumbscrew, make sure right edge of Push Guide is perpendicular to Front Stop Plate for accurate squareness.
 14. Turn Feeder "ON", set Mode Switch on **MANUAL** and turn Speed Control clockwise so Conveyor Tapes are moving slowly.
 15. Turn Vacuum Switch "ON".
 16. Press SET-UP Switch momentarily. This activates Suction Cup Bar and brings down an envelope. When envelope moves down Conveyor to Duplicator, make sure it clears Push Guide and does not touch springs on Stop Guide.
 17. Turn VACUUM Switch "OFF". Press SET-UP Switch again. This activates jogging mechanism. Adjust Jogger Guide so envelope just touches springs on Stop Guide.
- NOTE: TOO MUCH JOG CAN AFFECT REGISTRATION.**

18. Adjust Conveyor Tapes by moving Tape Guides (*located under Conveyor portion of Feeder*) while tapes are running slowly.

EXAMPLE: For No. 10 envelopes, use three (3) tapes. One over Stop Guides (*approx. 3/8" (1 cm) from springs*), one over Push Guide (*approx. 1/4" (6 mm) from right edge*) and one tape under Skid Wheel. For wider envelopes use additional tapes as needed.

19. Adjust Retainer Straps [#1, Fig. 9] over Stop and Push Guide Tapes.
20. When envelope is against Front Stop Plate, position Front Skid Wheel [#2, Fig. 9] so it lightly touches trailing edge of envelope.
21. Turn Press Pump "ON".
22. Turn Press Blowers "OFF" and turn Press Vacuum Knob to full.
23. Using Press Hand Wheel, pass envelope through Press.

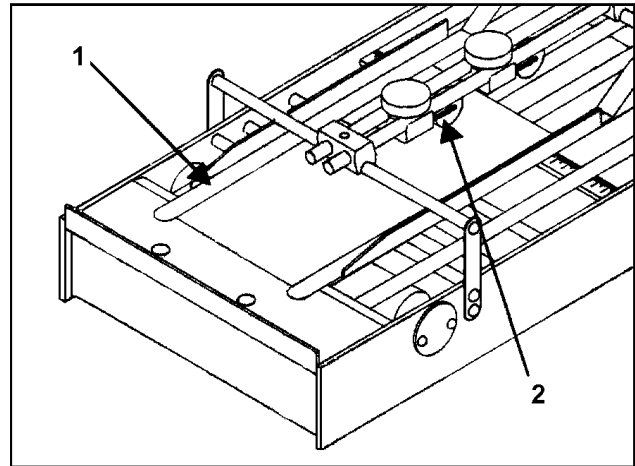


Figure 9

NOTE: MAKE SURE ENVELOPE GOES INTO GRIPPERS FIRMLY. ADJUST BUCKLE CONTROL ON PRESS IF NECESSARY.

24. Set Duplicator on lowest speed.
25. Set Feeder Mode Switch to "AUTO".
26. Turn Feeder Vacuum "ON".

27. Press “SET-UP” Switch momentarily. This brings down the envelope.

28. Turn press vacuum “ON”.

Feeder is equipped with a Photoelectric Sensor [#1, Fig. 10], which synchronizes Feeder with Press and prevents jam-ups. In case Press does not pick up an envelope, Feeder will not send another envelope. This acts as a built-in jam detector. Feeder remains neutral as long as an envelope covers Photoelectric Sensor. To start feeding again, turn Feeder Vacuum and Drive Motor “OFF”. Correct problem on Press and/or Feeder. Follow Steps 26-28 to start feeding again.

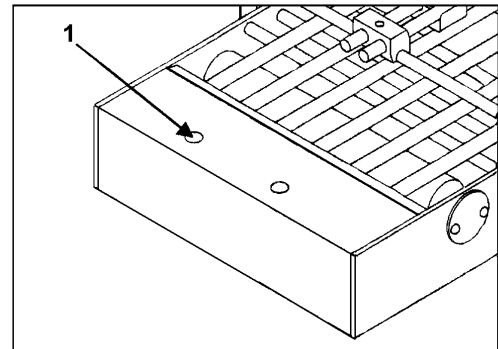


Figure 10

NOTE: Make sure Feeder is set up so envelopes are fed over Photosensor. Also, make sure no foreign objects (e.g. lint, paper) cover Photosensor. It is essential to Feeder's operation that Photosensor “sees” an envelope.

TO START AND STOP FEEDING: Use Duplicator Pump Switch. DO NOT USE Feed Power Switch. Feeder Power Switch should be turned “ON” when job is started and remain on until job is complete.

Press speed can be changed while Feeder is feeding envelopes. Electronic circuitry of Envelope Feeder is designed to respond automatically to operational commands of Press.

WARNING: ANY SPEED CHANGES TO PRESS SHOULD BE DONE GRADUALLY. RAPID CHANGES OF SPEED AFFECT REGISTRATION AND MAY CAUSE MISFEEDING.

OPERATING HINTS

- A.** Do not bend envelopes when setting Side Guides.
Front and Rear Guides must be snug against envelopes.
- B.** Form envelopes as required to maintain flatness to suction cups to improve feeding consistency.
- C.** Be sure bottom envelope (*in a stack of envelopes or tag stock*), rests on Sheet Separators.
- D.** Front Side Guides contain adjustable Sheet Separator Clips.
Clips project $3/32"$ (2.4 mm) beyond face of Guides.
Adjustment is seldom required.
 - 1.** Misfeeding may occur if clips extend too far under envelopes. First increase vacuum and test run; then, if required, move clip **[#1, Fig. 11]** to front using set screw behind them.
 - 2.** Double feeding may occur if clips are not under envelopes far enough. First decrease vacuum and test run; then, if required, move clips to front.
Vertical position of clips is also adjustable. Loosen two screws **[#2, Fig. 11]** and position bottom of clip flush with bottom of Guide.

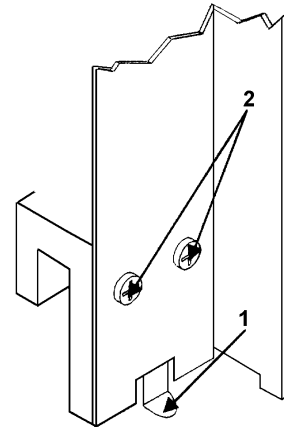


Figure 11

LUBRICATION INSTRUCTIONS

WARNING!

MACHINE MUST BE UNPLUGGED FROM ITS POWER RECEPTACLE WHILE PERFORMING LUBRICATION, MAINTENANCE, OR CLEANING PROCEDURES.

CAUTION

CARE SHOULD BE TAKEN TO KEEP LUBRICANTS FROM ELECTRICAL TERMINALS, SWITCHES, AS WELL AS ROLLERS, BELTS AND RUBBER PARTS.

When lubricating, pay particular attention to oil holes and all sliding parts.

NOTE: Residue of paper, dust, ink and other foreign material **MUST BE REMOVED** from gears, working levers, shafts and mechanisms before new lubricants are applied. This prevents undue wear caused by abrasion from this residual material. Areas around or adjacent to lubricated parts and surfaces **MUST BE FREE** of dust and foreign material.

LUBRICATION INTERVALS

Regular lubrication of oil ports (*indicated by red*) should be performed every 30 days on machines that operate 30-40 hours per week.

LUBRICANTS

- **OIL:** S.A.E. #20 non-detergent engine oil, or equivalent.
- **GREASE:** Commercial lithium grease.

GENERAL LUBRICATION

1. **Cams and Gears** – Cleaned and lightly oiled.
2. **Springs and Spring Levers**– Greased lightly.

NOTE: Before greasing **Springs and Spring Levers**, existing lubricant **MUST BE REMOVED**. Apply new grease sparingly – only at hook ends of Spring, not on body.

3. **Chain and Sprockets** – Lubricate by using commercial lithium grease.

NOTE: To gain access to most lubricating points, **Front Cover Assembly MUST BE REMOVED**.

FRONT COVER ASSEMBLY REMOVAL

1. Turn power “ON”.
2. Set “MODE” Switch to **MANUAL**.
3. Turn Speed Control Knob **CLOCKWISE** so Conveyor Tapes move slowly.
4. Depress SET-UP Switch momentarily.
5. Wait until Upper Pull-out Roller touches Lower Pull-out Roller and turn power “OFF”.
6. Unplug Feeder.
7. Unscrew 4 thumbscrews (2 on each side of the Feeder). [**#1, Fig. 12**]
8. Remove Front Cover Assembly. [**#2, Fig. 12**]

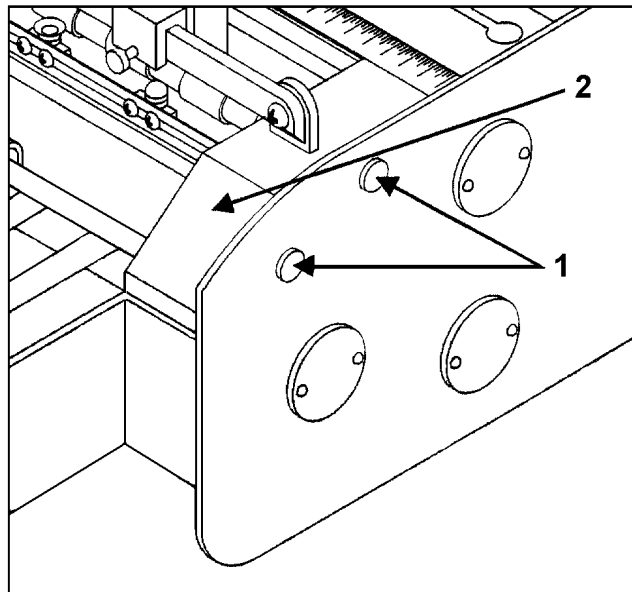


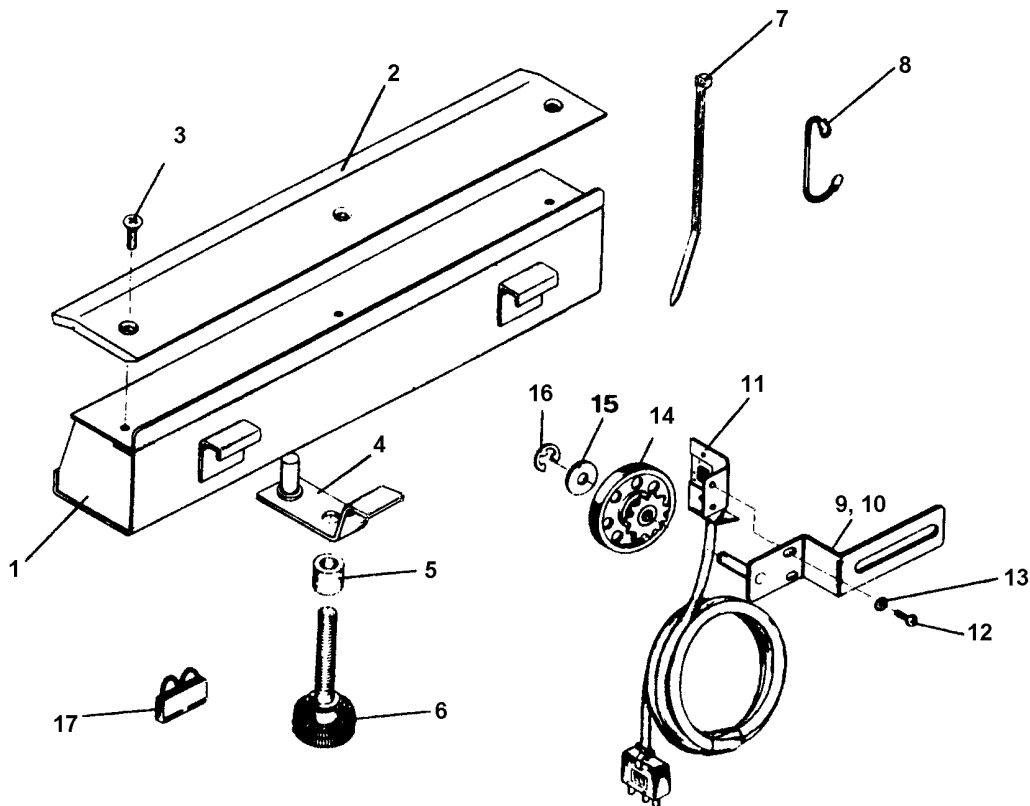
Figure 12

PARTS CATALOG

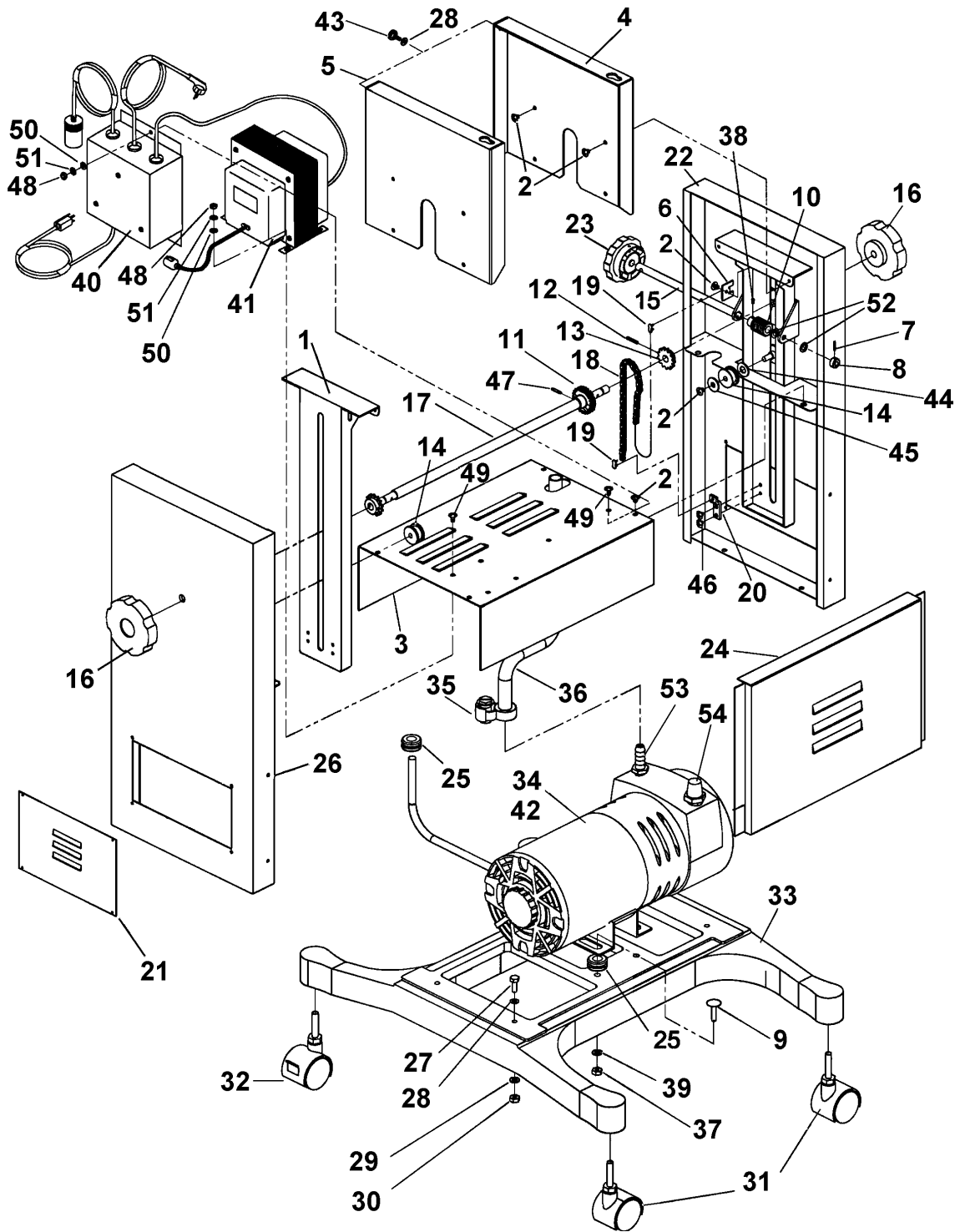
REPLACEMENT PARTS FOR HAMADA RS34/VS34 CONVERSION KIT A-226

KEY	PART NO.	DESCRIPTION	QTY
1.	89-150-18	FRONT FEED PLATE ASSEMBLY	1
2.	87-101-10	PAD, FRONT FEED PLATE	1
3.	123-0446	SCREW	3
4.	89-101-14	CLAMP, FRONT FEED PLATE	1
5.	87-101-39	SLEEVE, CLAMP SCREW	1
6.	87-101-16	SCREW ASSEMBLY, CLAMP	1
*7.	123-0113	PLASTIC TIES	4
*8.	89-100-82	PAPER BOARD STOP	1
*9.	89-150-200	PULSE GENERATOR ASSEMBLY	1
10.	89-150-201	SENSOR BRACKET	1
11.	89-140-213	SENSOR ASSEMBLY	1
12.	123-0274	SCREW, 6-32	2
13.	123-0252	STAR WASHER, #6	2
14.	89-140-207	MAGNET ASSEMBLY	1
15.	123-0311	WASHER, PLASTIC	1
16.	123-0081	TRUARC	1
17.	89-140-77	JUMPER PLUG – HAMADA	1

* REPLACEMENT PARTS FOR HAMADA RS34/VS34 AUXILIARY INSTALLATION KIT A-227



STAND WITH PUMP



STAND WITH PUMP

KEY	PART NO.	DESCRIPTION	QTY.
1.	156-102-18	ELEVATOR BRACKET (STANDARD)	2
1.	156-103-18	ELEVATOR BRACKET (LONG)	2
2.	123-0017	SCREW, 10-32 x 1/4 PH TRUSS	32
3.	156-103-05	PANEL – BASE – PUMP COVER	1
4.	156-103-07	SIDE PLATE, R/H	1
5.	156-103-06	SIDE PLATE, L/H	1
6.	156-103-25	ELEVATOR BRACKET SUPPORT	2
7.	123-0695	SPRING PIN, 3/32 x 1/2	1
8.	156-103-27	COLLAR	1
9.	123-0841	CARRIAGE BOLT, 5/16-18 x 1	4
10.	156-103-12	HELIX ANGLE WORM	2
11.	156-103-11	WORM GEAR, 20 TEETH	1
12.	123-0018	ROLL PIN, 1/8 x 3/4 – BLACK	3
13.	156-103-08	SPROCKET 25B13	2
14.	156-103-09	IDLER PULLEY	2
15.	156-103-21	WORM SHAFT	1
16.	123-0135	KNOB	2
17.	156-103-20	DRIVE SHAFT	1
18.	156-103-26	CHAIN, TRANSMISSION ROLLER	2
19.	123-0200	CONNECTING LINK, CHAIN	4
20.	156-103-23	ELEVATOR BRACKET SUPPORT	2
21.	86-103-04	COVER, SIDE PANEL	2
22.	156-103-03	SIDE PANEL, L/H	2
23.	123-0293	KNOB, HEIGHT ADJUSTMENT	1
24.	86-103-06	PUMP COVER, STAND	2
25.	123-0707	RUBBER GROMMET, 1/2 ID x 3/4 OD	1
26.	156-103-04	SIDE PANEL, R/H	1
27.	123-0143	SCREW, HEX 1/4-20 x 5/8	4
28.	123-0063	WASHER, PLAIN 1/4 -MOTOR & PUMP	8
29.	123-0064	LOCK WASHER, 1/4	8
30.	123-0054	NUT, HEX 1/4-20	8
31.	123-0517	CASTER, NON-LOCKING	2
32.	123-0521	CASTER, LOCKING	2
33.	86-103-31	BASE WELDMENT	1
34.	84-103-07	VACUUM PUMP ASSEMBLY, 115V	1
35.	123-0131	CLAMP, HOSE	1
36.	84-106-41	HOSE, PUMP	1
37.	123-0051	NUT, HEX 5/16-18	4
38.	123-0757	SET SCREW, 6-23 x 1/4 STD CUP PT	4
39.	123-0855	LOCK WASHER, 5/16	4
* 40.	84-140-78	RELAY BOX 220V / 50 Hz	1
* 41.	123-0436	TRANSFORMER, 220V / 50 Hz	1
* 42.	84-103-10	VACUUM PUMP, 220V / 50 Hz	1
43.	56-108-22	THUMBSCREW	1
44.	123-0096	WASHER, PLASTIC 3/8 x 3/4 x 1/16	2
45.	123-0311	WASHER, PLASTIC 9/32 x 3/4 x 1/16	2
46.	123-0701	SCREW, 10-32 x 3/16 PH TRUSS HD	4
47.	123-0034	ROLL PIN, 1/8 x 5/8	1
*48.	123-0050	NUT, 10-32 x 5/16 HEX ZINC	6
*49.	123-0024	SCREW, 10-32 x 3/8 PH TRUSS HD MS ZINC	6
*50.	123-0237	STAR WASHER, #10 EXTERNAL	6
*51.	123-0262	WASHER, #10 3/16 x 3/8 x0.032	6
52.	123-0312	WASHER, PLASTIC 5/16 x 1/2 x 0.030	2
53.	123-0145	FITTING	1
54.	AK840A	FILTER/MUFFLER	1
**	K247	SERVICE KIT, OLD STYLE PUMP	
**	K478	SERVICE KIT, NEW STYLE PUMP	
**	AK524	FELT, NEW STYLE PUMP ONLY	

* 220V/0HZ ONLY

**PARTS NOT SHOWN

